

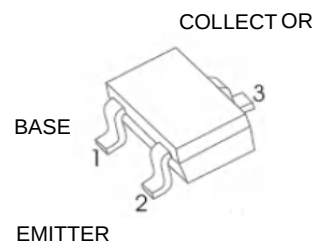


### S8550T TRANSISTOR (PNP)

#### FEATURES

Complimentary to S8050T

Collector current:  $I_C=0.5A$



MARKING : 2TY

#### MAXIMUM RATINGS ( $T_A=25^{\circ}C$ unless otherwise noted)

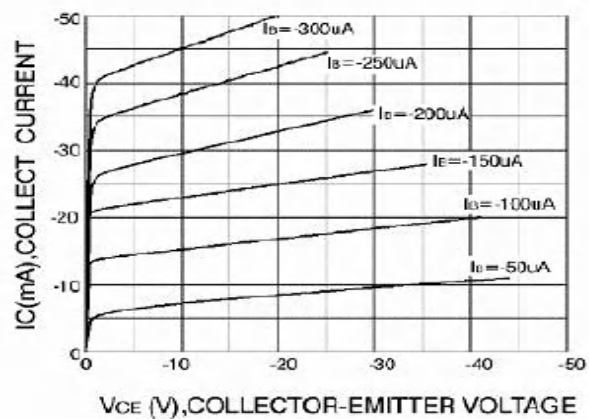
| Symbol    | Parameter                     | Value   | Units       |
|-----------|-------------------------------|---------|-------------|
| $V_{CBO}$ | Collector-Base Voltage        | -40     | V           |
| $V_{CEO}$ | Collector-Emitter Voltage     | -25     | V           |
| $V_{EBO}$ | Emitter-Base Voltage          | -5      | V           |
| $I_C$     | Collector Current -Continuous | -0.5    | A           |
| $P_C$     | Collector Power Dissipation   | 0.2     | W           |
| $T_j$     | Junction Temperature          | 150     | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature           | -55-150 | $^{\circ}C$ |

#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

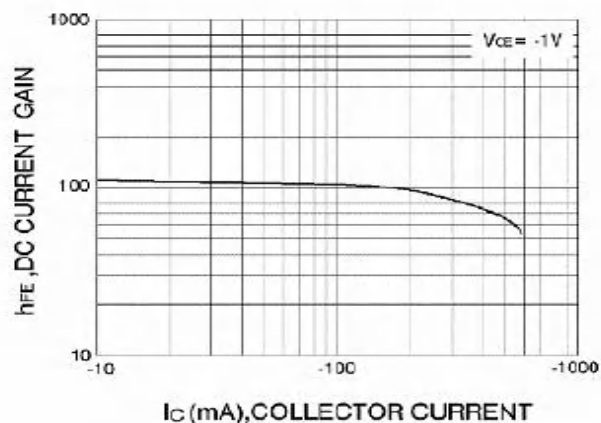
| Parameter                            | Symbol        | Test conditions                          | MIN | MAX  | UNIT    |
|--------------------------------------|---------------|------------------------------------------|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -100\mu A, I_E=0$                 | -40 |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -1mA, I_B=0$                      | -25 |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -100\mu A, I_C=0$                 | -5  |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -40V, I_E=0$                   |     | -0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -20V, I_B=0$                   |     | -0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -3V, I_C=0$                    |     | -0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -1V, I_C = -50mA$              | 120 | 400  |         |
|                                      | $h_{FE(2)}$   | $V_{CE} = -1V, I_C = -500mA$             | 50  |      |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500mA, I_B = -50mA$              |     | -0.6 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -500mA, I_B = -50mA$              |     | -1.2 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -6V, I_C = -20mA$<br>$f=30MHz$ | 150 |      | MHz     |



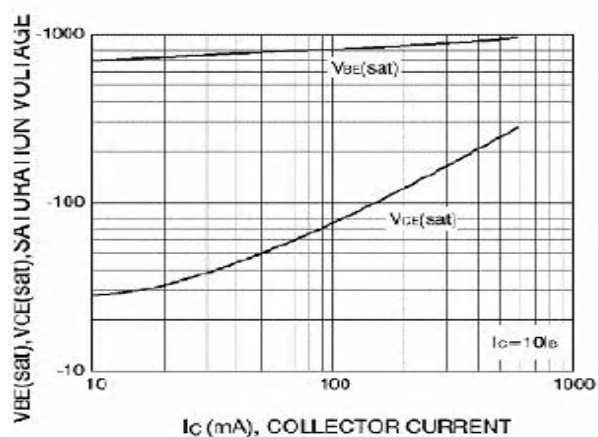
## Typical Characteristics



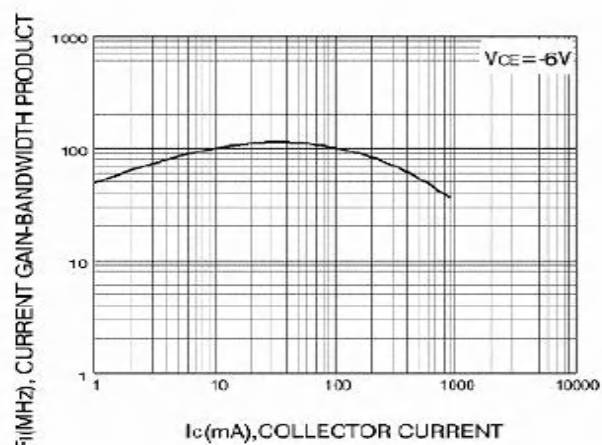
Static Characteristic



DC current Gain



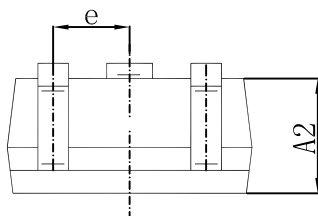
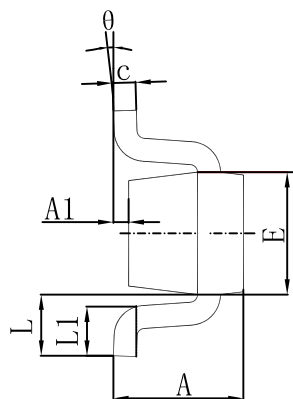
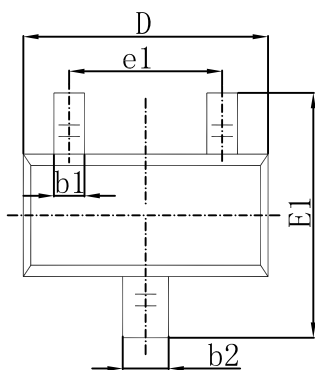
Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage



Current Gain Bandwidth Product

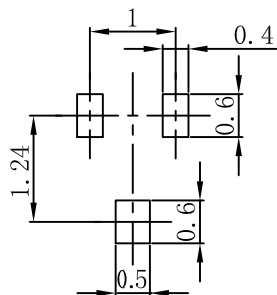


## SOT-523 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      | 0.700                     | 0.900 | 0.028                | 0.035 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.700                     | 0.800 | 0.028                | 0.031 |
| b1     | 0.150                     | 0.250 | 0.006                | 0.010 |
| b2     | 0.250                     | 0.350 | 0.010                | 0.014 |
| c      | 0.100                     | 0.200 | 0.004                | 0.008 |
| D      | 1.500                     | 1.700 | 0.059                | 0.067 |
| E      | 0.700                     | 0.900 | 0.028                | 0.035 |
| E1     | 1.450                     | 1.750 | 0.057                | 0.069 |
| e      | 0.500 TYP.                |       | 0.020 TYP.           |       |
| e1     | 0.900                     | 1.100 | 0.035                | 0.043 |
| L      | 0.400 REF.                |       | 0.016 REF.           |       |
| L1     | 0.260                     | 0.460 | 0.010                | 0.018 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-523 Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.